Comment Letter O024 Continued

The Authority juxtaposes the Modal Alternative and the HST in the LUP Section, concluding that the HST is more favorable to urban planning without mentioning it is only in the context of intra-city travel. Such an oversimplified comparison creates the false impression that the HST will significantly alleviate both intra-city and inter-city travel.

The public should not be given the false impression that the HST will be the cure-all, that will absolve highway congestion. The simple fact is that California highway systems will remain burdened and congested mainly because of intercity travel. Even with the addition of the HSR, highway systems will still need to be improved and expanded—especially with the inevitable increase of California's population. Similarly, if airplane capacity is not increased, additional airports and runaways will also be needed in the near future because of the inevitable population increases. By comparing the Modal Alternative with the HSR as mutually exclusive options, the Authority fails to serve public good. Instead, they provide the false hope that the HSR project will absolve the need to improve current modal systems. Such evasion is unnecessary if the HSR is indeed a socially desirable project for California. **The fact is that the HSR will not directly address intra-city travel and as such the final EIR/EIS should address the following:** O024-8 cont.

- **To what extent, if at all, intra-city traffic and congestion will be improved by the diversion of intercity travelers.**
- **The fact that even with the creation of the HSR existing highway systems and airports will still need to be expanded.**

4. Urban Planning & Development

The need to consider new suburban developments and urban redevelopments is another crucial element. Both suburban developments and urban redevelopments are closely related to one another and to the proposed HSR. This interrelationship must be considered during the O024-9

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planning, design, and development of urban areas. If left up to chance the effected areas will not be successfully developed and the resulting inefficiency will be difficult if not impossible to remedy. In Europe, the popularity of the high speed train is in large part related to the fact that the train stops were planned around the city's geography, as opposed to the HSR which does not plan around the city, but rather intends the city to build around it. In order to mitigate the effects of this post-development high speed train plan, substantial state-wide planning and redevelopment must be incorporated into the proposed project. This approach will be more costly than the HSR singly, but it will not be as risky. Thus, the city planning in conjunction with the HSR will result in substantial long-term benefit to the state's inhabitants and economy, ultimately costing California less than the alternative. O024-9 cont.

The need to consider the impacts of possible changes in land-use regulations is also crucial in determining the transportation needs of California. The main focus should fall on possible multi-use zoning changes, which, for example, were successfully adopted in Oregon, allowing the Portland population to increase substantially without creating the need for additional road expansions. Since the proposed HSR does not address local traffic problems, localities will need to individually address these issues within the next few decades. For example, if Los Angeles were to follow Portland's example and through zoning substantially reduces it's traffic problems, the HSR would have a more difficult time competing with the resulting less congested highways. Further, airline companies could more easily compete with the highways by simply lowering their prices and/or purchasing newer, larger aircraft. **In light of these issues the Draft must closely consider such possible zoning changes, and should modify its design to complement the surroundings through which it will need to compete. Specifically, with respect to urban planning and development the final EIR/EIS should address how plans for the**

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development and use of land in both urban and suburban areas will integrate and complement the HSR. O024-9 cont.

B. Costs & Financing

1. Large Public Works Are Consistently Oversold

O024-10

Large public works projects are consistently oversold to their public constituents before they are approved and fully constructed.[33] In the early stages of soliciting public support, proponents of major public projects commonly put forward costs and ridership numbers to maximize public appeal.[34] The cost projections in the draft program document are merely initial figures that will be used to sell the project to the California constituents and lawmakers, so it is absolutely necessary that these cost and ridership projections be questioned.[35]

Although 100% over cost and 50% under ridership may seem extreme, in fact these percentages are typical, especially with rail projects.[36] The Authority leveraged the experience and technology of existing rail in its current plan for this innovative California transportation project.[37] The Authority choose the steel on steel, electric model because it is a proven

[33] *See* Megaprojects and Risk, *supra at Note 25, Ch. 2.*
[34] *See Id. Ch. 4.* (discussing the research of Martin Wachs, *Ethics and Advocacy in Forecasting for Public Policy*) Although not specific to this project, extensive interviews of project consultants and planners have supported the position that officials often underestimate the true costs of public projects and embellish the benefits in order to secure public support.
[35] The US Department of Transportation study focusing on ten rail projects further support the position that most public transportation are oversold to the public. Finding that, on the average, the actual costs per passenger were 500% higher than initially projected, the study concluded that, had the decision-makers been given more accurate cost and ridership projections, it would have been very likely that they would have chosen other alternatives altogether. *See* Megaprojects and Risk: An Anatomy of Ambition. Ch. 4, discussing Pickrell, *Urban Rail Transit Projects: Forecast Versus Actual Ridership and Cost.*
[36] *See* Megaprojects and Risk: An Anatomy of Ambition. Ch. 4.
[37] *See* Business Plan 2.4 (discussing the Authority's use of existing rail systems, specifically European and Japanese technology, in order to estimate travel times and operating costs).

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technology, but the Authority must look to the historical experience of large public works projects to arrive at the most cost-effective, efficient, safe, and problem-free system.

Historically, major public works projects have faced a variety of problems. One particular example, the "Big Dig" is the perfect cautionary tale. While very different projects Boston's "Big Dig" and the HSR have one key element in common: the firm of Parsons Brinkerhoff. Along with Bechtel, Parsons Brinkerhoff was a key manager in Boston's big dig project. The project was originally sold as a $2.6 billion venture, but the costs quickly increased to $14.6 billion. This twelve billion dollar discrepancy led to a major lawsuit alleging that the project managers, Parsons Brinkerhoff, knowingly concealed the true costs of the project from state officials.[38] O024-10 cont.

This is not to say that Parsons Brinkerhoff intentionally deceived the public in their cost projections for the Big Dig. Instead, this recent experience emphasizes that even a reputable firm with extensive experience can grossly underestimate the true costs of a major public project. In light of this, the Authority *must* question how Parsons Brinkerhoff approached the cost projections for this project. Further, the Authority should inquire how the Big Dig failures have informed the current cost projections. It is both reasonable and necessary for the Authority to more thoroughly question the projections provided here to ensure those projections will not run into the same cost overruns that occurred in Boston. The Authority must insist on evidence of institutional learning. If Parsons Brinkerhoff learned nothing from the Big Dig failures, California can expect the same financial disaster with high-speed rail.

In light of the cost projection failures of other rail projects, and Parsons Brinkerhoff's earlier miscalculations, the Authority must insist on details for what will happen if the high-

[38] *See* http://www.usatoday.com/news/nation/2004-03-18-big-dig_x.htm

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speed rail project runs over budget. Specifically, the Authority needs to find out how cost overruns will affect the bonds funding the project, California taxpayers, and the state's economy. The financial health of the state is a necessary component to the success of the project, therefore a thorough contingency plan for the Authority to implement in the event of cost overruns is crucial. Without this thorough inquiry, decision-makers will have insufficient information to decide whether or not the high-speed rail project is in the best interest of California.

To address the potential that HSR costs more than anticipated and draws fewer riders than expected, the Authority or other governing agency must create a plan both for the worst-case scenario and a plan to ensure that costs are controlled and ridership encouraged. The Authority has not completed any viability calculations for worst case scenarios. As discussed earlier, it would be extremely helpful to the decision-makers if the Authority completed calculations using a cost projection of 100% over the existing projection, and ridership numbers of only 50% of the lower projection used in the program document.

One method to address spiraling costs is to make contractors and other parties accountable. Currently, the Draft makes no mention of these options in its plans for HSR despite the fact that this could help ensure the project remains financially viable. The Authority should consider developing a plan that holds contractors and other managing parties to within a reasonable range of their initial cost projections. Assuming this additional risk may appear more costly up front, but a contractor's assumption of the risk creates a strong incentive for them to be accurate in their cost projections. Requiring accountability will hopefully lead to more accurate cost projections, and will relieve the public from having to assume large, unexpected costs mid-project. Also, decision-makers will be able to more accurately assess the viability of the project.

O024-10 cont.

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Cost calculations and viability assessments are of primary importance because the project is expected to be completed in stages. If earlier phases cost significantly more than projected, while bringing in fewer riders than expected, it may compromise the project as a whole.

In short, to ensure that the project develops successfully, it is imperative that the Authority set out a method of accountability. Specifically, this should include what risks will be assumed by what party, and how any cost discrepancies will be handled as the project is constructed. There is no doubt that a major construction project, like the high-speed rail, faces many unknown factors: tunnels will need to be constructed; rights of ways acquired, alignments decided upon, etcetera. The Authority cannot accurately predict the problems that will arise, so it is important that the Authority decide how it will address the problems when they do arise, and what parties will assume the risk. This is not to say there must be absolute liability if cost projections are wrong, but it must be apparent what parties are responsible for the individual cost projections, and how the cost discrepancies will be resolved in order to insure that those making the projections have an incentive to make the most accurate prediction possible. **As such, the final EIR/EIS should address following:**

- **The Authority should take every precaution necessary early on, in order to minimize the probability that the cost projections will be erroneous. In addition, the Authority should fully disclose said precautions to the public.**
  - **These precautions should include transparent accountability and a clear plan of action if the project turns out to be over budget and low on riders.**
  - **Specifically, it would be extremely helpful to the decision-makers if the Authority completed viability calculations using a cost projection of 100% over the existing cost projection, and ridership numbers of only 50% of the lower projection used in the program document.**
- **The Authority should pan thoroughly for the worst-case scenario where ridership levels are minimal and costs are substantially higher than predicted.**

O024-10 cont.

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2. *Comprehensive Cost Analysis: The External Social Costs of HSR*

The Draft fails to provide a comprehensive cost comparison of its alternatives. In the final EIR/EIS the Authority should provide a comprehensive cost comparison between the No Project, Modal, and HSR alternatives which takes into account both internal costs, like building, operating and maintaining the system, and external social costs, such as air pollution, noise pollution and accidents generated by each alternative.

A comprehensive cost analysis may change the balance between the desirability of each alternative. In a study conducted by the Institute of Transportation Studies at UC Berkeley, researchers reached a cost analysis that differs significantly from the findings of the Authority. That study incorporates the following costs to calculate the total cost of a transportation mode:

- Infrastructure Costs–including capital costs of construction and debt service (ICC), and costs of maintenance and operating costs as well as service costs to government or private sector (IOC). O024-11 cont.
- Carrier Costs–aggregate of all payments by carriers in capital costs to purchase a vehicle fleet (CCC), and maintain and operate a vehicle fleet (COC), minus those costs (such as usage charges) which are transfers to infrastructure, which [are labeled] Carrier Transfers (CT).
- User Money Costs–aggregate of all fees, fares and tariffs paid by users in capital costs (UCC) to purchase a vehicle, and money spent to maintain and operate the vehicle or to ride on a carrier (UOC); less those costs (such as fares) which are transfers to carriers or infrastructure, and accident insurance, which is considered under social costs, which [are labeled] User Transfers (UT).
- User Travel Time Costs (UTC–the amount of time spent traveling under both congested and uncongested conditions multiplied by the monetary value of time.
- Social Costs–additional net external costs to society due to emissions (SEC), accidents (SAC), and noise (SNC) and are true resource costs used in making and using transportation services.[39]

[39] David Levinson et al., *Air, High Speed Rail, or Highway: A Cost Comparison in the California Corridor*, Transportation Quarterly 53:1 2-3 (1999), *at* http://www.ce.umn.edu/~levinson/papers-pdf/Californ.pdf.

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The following equation is adopted to capture the full cost (FC) of a given transportation mode:

FC = ICC + IOC + CCC+ COC - CT + UCC+ UOC - UT + UTC + SEC + SNC + SAC.[40]

Utilizing the above equation as its basis for analysis, the study concludes that the total cost of high speed rail exceeds the total cost for air and vehicular travel.[41] Moreover, although the total cost of high speed rail is close to that of highway transportation, the total cost for a rail system is almost twice as much than the total cost for air.[42] These figures imply that, contrary to claims made in the EIS/EIR, high speed rail is not a cost-effective intercity travel alternative in California, especially in comparison to air travel.[43] O024-11 cont.

Given the study's conclusions, it is critical for the authority to undertake this type of comprehensive cost analysis and conduct its own calculations so that the Authority and the public are better able to understand the full cost of possible transportation alternatives to resolve transportation issues. **With respect to cost analysis, the final EIS/EIR should address whether, after all external social costs are incorporated (i.e. noise pollution, air pollution, and accidents) into cost calculations for the proposed HST , is it still the more cost-effective option than the No Project and Modal Alternatives proposed in the EIS/EIR.**

3. *Revenue Projections and Private Sector Participation in Project Financing Are Unrealistic*

As part of developing its funding scheme for the HSR, the Authority appears to be undertaking extensive research of various private sector funding alternatives, such as design-build-operate-maintain contracts, franchises, and vendor financing. These alternative have all O024-12

[40] *See Id.* at 3.
[41] *Id.* at 7.
[42] *See* Draft EIR/EIS §7-13.
[43] *See Id.* 2-4.

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Comment Letter O024 Continued

been discussed in the Business Plan,[44] and will likely be covered in detail in the upcoming Implementation Plan.[45] As the Authority considers these private funding options and how they've been utilized in existing rail systems, the limitations of private sector partnerships and extrapolate relevant lessons from these existing projects should be recognized.

Despite the Authority's claim that the rail "system is a system that can be operated without public subsidy,"[46] previous experience shows us that even with a concession model and private sector involvement, public subsidies and direct grants are likely necessary to sustain this type of transit system.[47] Accordingly, while optimizing private sector financing will play a key role in helping offset taxpayer funding for the project, promoting the rail system as a financially self-sufficient and net profit-generating business seems misleading.[48] This contention is supported by the history of rail projects worldwide, which tend to be characterized by cost overruns, overly optimistic revenue projections and overvalued economic development.[49]

The case of the Europe's Channel tunnel, or Chunnel as it is referred to, provides some useful lessons in this area. Construction began on the Chunnel in 1987 and it began operating in 1994. The Chunnel is based on a build-own-operate transfer model similar to that proposed for the California system.[50] Projections for the financial success of the project were optimistic, as they are for California's proposed rail system, and private sector involvement through

O024-12 cont.

[44] *See Id.* at §6.4
[45] Systra, *Systra News February 2004: California High-Speed Rail System, at* http://www.systra.com/news/news0039.htm (last visited April 19, 2004).
[46] *See* Draft EIR/EIS §2-4
[47] Brent Flyvbjerg et al., *Megaprojects and Risk: An Anatomy of Ambition* 95 (Cambridge University Press 2003).
[48] *See* Draft EIR/EIS §8.1 (claiming that "a high-speed train system is a smart investment that would return a benefit of at least two dollars for every public dollar invested" and "once built, the service provided by the system, will yield annual operating surpluses in excess of $300 million".
[49] Flyvbjerg supra note 7 at 136.
[50] *Id.* at 33.

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concession financing was implemented.[51] Since its construction and after almost ten years in operation, the Chunnel cost nearly twice as much as initially projected, with revenues generated from operation of the system not being able to cover costs,[52] and current private sector concessionaire share prices barely above the 1987 issue prices.[53] These financial problems have resulted in part from unanticipated environmental and security issues, simple construction problems and setbacks, a delay in the construction of links to local transit systems and fierce competition from cheap airfares.[54] These factors appear applicable to California's own high-speed rail project, especially in light of today's security threats borne out by events like September 11 and the Madrid train bombing, as well as competitive market behavior exhibited by airlines such as Southwest Airlines.

Despite the Authority's attractive rhetoric about applying a new "business investment mind-set" to funding and operating the proposed high-speed rail system, it should proceed with caution, keeping in mind that private sector involvement is not a panacea. Policy leaders and government officials promoting rail should be candid in acknowledging that a public infrastructure project such as this may not be a profit-generating enterprise. Instead, the HSR is about realizing social and political objectives, many of which are laudable. As the Authority's own surveys find, "Californians like the concept of a high-speed train system and are willing to support it—even with the prospect of a tax increase."[55]

The final EIR/EIS should address what financial obligations are imposed on California's taxpayers and what effect these obligations will have on California's fiscal

O024-12 cont.

[51] *Id.*
[52] *Id.*
[53] Brian O'Connor, *Dark days ahead for Tunnel*, Daily Mail, April 8, 2004.
[54] *Id.*
[55] HSRA supra note 3 at 7.2.

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health if projected, cost, ridership, and revenue levels are not met and the private sector is not able to internally capture loss. O024-12 cont.

C. Ridership

1. The Draft EIS/EIR Makes Substantial Assumptions About Ridership

O024-13

Attracting ridership from other modes of intercity travel is a key assumption underlying Project success. Section 3.2 and Table 3.3 of the Business Plan estimate that 94% of HST passengers will be attracted from an alternate mode of transportation. By 2020, the Business Plan projects that 45% of the HST passengers will have been attracted away from the air mode; these 14.4 million annual passengers attracted from air travel represent 56% of the entire California intercity air market.[56] Similarly, the HST system estimates it will attract 13.4 million intercity vehicle travelers from their cars by 2020; these passengers represent 42% of the expected HST ridership. Furthermore, the HST is expected to attract an estimated seven percent of the trips that would otherwise have been made on the highways. Finally, the HST system is anticipated to attract two million annual intercity trips consisting of passengers who would not have undertaken intercity travel at all, but for the existence of the HST.

Attracting such a substantial proportion of ridership, especially within the first several years of system operation, is a tall order. In particular, attracting well over half the intercity air travelers from their accustomed mode of travel to regular HST ridership ins such a short period of time is a monumental undertaking. These expansive projections accentuate the need for the HST system to establish and maintain its attractive posture vis-à-vis air and vehicular travel, so as to attract passengers out of the airports, off the highways, and—for those who would not have

[56] Business Plan, Table 3-4.

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traveled at all but for the HST system—out of their homes. The Draft and the Business Plan contain no substantiation for these projections, and provide the members of the public, cooperating agencies, and project decision-makers no opportunity to evaluate the strength of the foundation underlying these estimates. Project viability will only be assured if accurate ridership projections are presented, which can only be obtained through informed discourse. The high ridership level projections rely on the proposition that existing travelers will be enticed to switch modes of transportation to the HST. The switch is supposed to be a result of the virtues of HST travel unique features. Further, new California intercity travelers—whether added through immigration or by native Californians newly reaching traveling age in the interim—will select HST travel over the principal alternatives of air and car travel. The factors travelers consider are listed in section 3.2 of the Draft such as travel time, reliability, safety, connectivity, sustainable capacity, and passenger cost. Of this list, the Draft acknowledges that travel time, which is cited as "a key" determinant of attractiveness, and passenger cost; also "one of the key factors that can influence passenger choice of modes" are the most significant parameters that may prompt passengers to select HST travel. O024-13 cont.

a. Time Considerations

i. Travel Time

O024-14

Merging Table 3.2-6 (delineating the door-to-door travel times for air travelers, once the HST system is in operation) and Table 3.2-7 (estimating the door-to-door travel times for HST passengers) produces the following side-by-side comparison of total travel times:

City Pairs	Door-to-Door Travel Time—Air Mode	Door-to-Door Travel Time—HST Mode	Time Advantage: HST over Air Mode	Percentage Advantage: HST over Air Mode
LA—SF	3:26	3:20	0:06	3%
Fresno—LA	3:00	2:23	0:37	20%

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LA—SD	2:46	2:16	0:30	18%
Burbank—SJ	3:08	2:52	0:16	8%

The Draft projects a travel time advantage in favor of the HSR mode for all city pairs; however, some advantages amount to a mere few minutes. In fact, passengers on the HSR system's flagship route, San Francisco to Los Angeles, will see only an estimated three-percent reduction in door-to-door travel time compared to flying, and HSR passengers on the other north-south route examined in Tables 3.2-6 and 3.2-7, Burbank to San Jose, will experience only an eight-percent time advantage.

O024-14 cont.

How precise are travelers in calculating travel time when they are conducting their comparison shopping? Even if travelers do consider a three or eight- percent travel time differential to be a relevant consideration, how material will that slender difference be in prompting a switch from their accustomed mode of travel to a new one? Will these marginal differences—or even a half-hour advantage in travel time between Los Angeles and San Diego—be so compelling as to spur 56% of all intercity air travelers in 2020 to switch from air to HST travel? **Due to these concerns, the final EIR/EIR should address the following: the sensitivity of travelers to differences in travel times between various modes of transportation.**

ii. Access Time

The Draft describes several temporal components that comprise the calculation of cumulative door-to-door travel time. The longest segment in each time calculation is the time spent actually traveling on the plane or train, or "line-haul travel times." As Appendix 3.2-A makes clear, the air mode holds a substantial advantage over the HST mode in terms of line-haul travel time—with train line-haul travel times taking as much as 82% longer than air travel for the Los Angeles to San Francisco and the Burbank to San Jose city pairs.

O024-15

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In order for the air mode's substantial advantage in line-haul travel times to turn into a moderate disadvantage in cumulative door-to-door travel times, as compared to HST there must be significant savings in access, terminal, and arrival times. Appendix 3.2-B gives this crucial topic short shrift, providing vague, imprecise, and unsubstantiated estimates that heavily favor HST. Particularly the conclusions regarding the HSR mode's purported advantage in access and arrival times is not quantified, and is conclusorily described as reflecting "weighted average travel times to the various regional airports and train stations."

The access and arrival time projections are premised on the assumption that HSR travelers will find the locations of stations—predominantly planned for downtown locations—more time-efficient than airport locations. The conclusion that it takes significantly more local travel time for the average intercity traveler to get to and from the airport than to and from the HSR station, however, is unsubstantiated. The contrary conclusion appears just as plausible: if 62% of the HSR passengers are non-business travelers,[57] these recreational travelers are not necessarily more likely to be initiating or concluding their trips at a location where access to and egress from the downtown stations is any more efficient than the airports. Furthermore, as metropolitan areas continue to expand geographically, and business increasingly relocates outside of urban centers, it is uncertain if the origins and destinations of business travel be concentrated in downtown areas so as to provide a substantial local travel time advantage to the HSR stations sited in city centers. **Thus, it is necessary for the final EIR/EIS to address the impact of expanding cities on the convenience of urban center location.**

O024-15 cont.

[57] *See* Business Plan, Table 3.1

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Comment Letter O024 Continued

iii. **The Effects of Changing Alignments and Adding Stops**

The travel times advertised by the Authority are very deceptive. The times provided are the optimal travel times that do not account for interference from other trains or stops at intermediate stations. The travel times were calculated without incorporating the proposed Palmdale station, and under the assumption that each rail segment is utilizing the fastest alignment and station location. The Palmdale line will add twelve minutes to the line haul time from Los Angeles to San Francisco. In fact, there are additional discrepancies between the various lines and the station options. For example, there is a twenty-one minute gap between the optional Los Angeles to Orange County alignments, a seven minute gap between the Mira Mesa and San Diego station choices, and an eight minute gap between the suggested Los Angeles to March alignments. All the other alignments have at minimum a one minute difference that when viewed collectively significantly differ from the optimal advertised time. **If the Authority is assessing ridership based on travel times, it should provide a realistic picture of the actual times. The actual alignments and the number of stops, as well as any potential changes that could be made should all be part of the complete analysis presented in the final EIR/EIS.** O024-16

iv. **Connectivity With Other Transportation Networks**

"The Authority's legislative mandate is to develop a high-speed train system that is coordinated with the state's existing transportation network, particularly intercity rail and bus lines, commuter rail lines, and urban rail transit lines."[58] As previously demonstrated, the Draft does not address how this coordination will be facilitated and if efficient the coordination is even possible. Transfer times are a huge factor in determining access and arrival times. Schedule coordination is thus extremely important to the success of the HST project. **Questions such as** O024-17

[58] Building a High-Speed Train Network—Executive Summary : Section 5.1

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how coordination of schedules will be handled must be included in the final EIR/EIS. In fact, if the Authority were to provide a demonstration using a mock schedule many concerns would be alleviated and the Authority can properly fulfill its mandate. O024-17 cont.

a. **Reliability**

The Draft addresses travel reliability as a comparative consideration, characterizing this feature as "important" to the traveler. **The question must be asked, however, how key a factor is on-time reliability, when travelers engage in the pragmatic process of comparatively evaluating travel modes?** Moreover, if 62% of the projected HSR passengers are traveling for a non-business purpose, and are presumably on a more flexible schedule what is the value of the HSR's purported reliability advantage for this substantial majority of inter-city travelers?

i. **Weather, Construction and Other Factors Affecting Travel Time**

It is unclear whether the HSR "reliability" determinations shown in Table 3.2-8, take into account the effects that construction, weather, incidents, etc. will have on the public transit systems riders will utilize to and from the stations. This is a problem that also affects air travel, but it should not be ignored. At airports the extra time required for boarding provides a buffer in case the bus, car, or shuttle used to get to the airport is delayed. With the relatively short time given for boarding the HSR, it will be important for people to be able to access reliable public transit to get them to and from the station so they do not miss their train. **The final EIR/EIS should address how reliability is affected by such things as transportation delays and weather.** O024-18

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ii. Lack of Redundancy & Potential Congestion On Shared Alignments

The Draft also fails to address the impact that lack of redundancy will have on the traveling public's subjective sense of reliability. A casualty or incident affecting one highway traffic lane, or even severing an entire freeway, has limited disruptive impact because the road system has redundancy that permits prompt re-routing around trouble spots, via alternate freeways, or even short segments of surface roads. Similarly, the disruptive effect of an incident or casualty affecting a single aircraft, a runway, or even an entire airport can be ameliorated by redundancies inherent in the air transportation system. The problem is that degree of redundancy is not present in the HSR system. While the probability of an incident or casualty affecting a component of the HSR system may be low, one such major event—such as one that severs a track line—could completely devastate the system's schedule for an extended period of time. Even one incident could considerably alter the traveling public's subjective outlook on the true reliability of the HSR mode, substantially degrading the attractiveness of the HSR system's reliability.

O024-19

Another significant failing is that the Draft fails to adequately address the operational issue of congestion with respect to the HSR's shared use of right-of-way with freight and conventional passenger rail on many of the proposed alignments. Section S.4.3 states that in order to reduce the cost of the HSR project and to minimize the potential environmental impacts, extensive portions of many of the alignment options are within the existing rail right-of-way. For example, one alignment option for Oakland to San Jose uses the "Hayward Line" freight railroad right-of-way which is also used by the "Capitol" Amtrak service. Another example is the alignment option for Sacramento to Stockton, which will use either the Central California Traction freight line or the Union Pacific rail line. This list of shared corridors is extensive but

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the effects of shared usage are minimally accessed. When comparing the alignments in section 6, the Draft only comments on congestion for three routes: potential delays on the San Francisco to San Jose line due to Caltrain, a potential conflict with Union Pacific Freight on the Oakland to San Jose stretch, and on the Los Angeles to Orange County line delays due to Amtrak and Metrolink.

According to the California Department of Transportation, these alignments are not even at the present time the most congested.[59] The Draft fails to address congestion along the lines of most concern, namely from Merced to Los Angeles and from Los Angeles to the Inland Empire. These alignments follow the Union Pacific or the Burlington lines and have been singled out by the Depart of Transportation as being the most congested. The predominate reason for this congestion is that there is not enough track capacity for the movement of both passenger and freight services.[60]

O024-19 cont.

Section 3.2 states that reliability is the delivery of predictable and consistent travel times and is a key factor in attracting passengers to use a particular mode of travel. Currently 22% of Amtrak trains are delayed and 35% of Metrolink trains are late due to rail congestion.[61] Still, the Draft claims that the HST will be more reliable than the highway or air travel,[62] and, the Authority uses the HST's impressive reliability factor to predict ridership. It is unclear how the Authority was able to assess reliability without properly assessing congestion.

Rail congestion is so important to reliability considerations because it impacts nearly every other concern addressed in the Draft. The cumulative impact of all trains must be

[59] Statewide Rail Transportation Assessment prepared by the California Department of Transportation, September 2002—Chapter 4 beginning on page 27
[60] *Id.* at pg 31
[61] Id. at 32
[62] EIR/EIS pg 1

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determined in order to accurately predict the effects of the HST. If the HST is going to share alignments with other forms of rail, it cannot be evaluated in a vacuum. **As such the final EIR/EIS should address:**

How confident will the public be with a mode a transportation that relies on a single line?

How will congestion affect reliability for all alignments? It would dissuade concerns to have a mock schedule showing how the HST will run with other rail systems. O024-19 cont.

How will negative service impacts caused by the various rail's shared alignments be mitigated?

How will the addition of the HST effect current freight transportation? This is extremely important when evaluating the economic impact of the HST.

If congestion occurs, how will this affect ridership?

iii. The Impact Of Using New Technology

The Draft also fails to adequately address the impact that the use of untested technology may have on travel reliability. The HSR system relies for its line-haul travel time projections on 217-mph technology that has admittedly not yet been developed, tested, or placed into operation anywhere in the world. Similarly, the highly sophisticated satellite-based centralized control system that will be necessary to precisely coordinate train routing also remains unproven. **It is essential that the final EIR/EIS address to what degree the HSR system truly exhibits a distinct reliability advantage after the risks inherent in the implementation of cutting-edge technology and the lack of infrastructure redundancy are taken into account.** O024-20

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b. Safety of HSR Versus Air

- Table 3.2-10 reflects a safety comparison by mode of transportation. The safety rating conclusions are summarial and largely unsubstantiated by meaningful objective evidence. The characterization of air travel as having a "poor" safety performance record in the "environment" characteristic—including weather, guideway, condition, and terrain considerations—is particularly misleading. The "poor" safety rating is contradicted by the acknowledgement that "the likelihood of fatality due to commercial air travel is relatively small (0.02 fatalities per 100 million [passenger miles traveled])."[63] Despite the admission that "flying a typical nonstop flight is 65 times safer than driving the same distance," those two modes are given identical "poor" safety ratings in the "environment" characteristic. The comparative safety records of the HSR and air travel modes worldwide likely justify a conclusion that California's HSR system will enjoy a moderate safety rating advantage over the air mode. Nevertheless, it is highly questionable whether this difference will be so significant as to entice large numbers of air travelers to the HSR. **Two key questions must be answered in the final EIR/EIS: (1) to what extent are people choosing modes of travel based on safety, and (2) as compared to air, how much safer does HSR need to be to attract passengers from air?** O024-21

c. Travel Cost Considerations of HSR versus Vehicles

While the HSR system's strongest competition in the travel time, reliability, and safety attractiveness categories is the air travel mode, the train must primarily compete against the car when evaluating relative cost. Although the Business Plan, at Section 3.2 and Tables 3.3 and 3.4, projects that the HSR will attract only 7% of the total intercity car travelers out of their O024-22

[63] EIR/EIS, page 3.2-20.

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